

II. CLAIMS

1 1. A body implantable stimulator for body
2 tissue comprising:
3 means for measuring a physiological
4 parameter;
5 means for monitoring electrical activity in
6 said body tissue;
7 means responsively coupled to said measuring
8 means for computing a variable time interval based upon
9 said physiological parameter as measured by said measuring
10 means; and
11 means responsively coupled to said
12 monitoring means and said computing means for generating
13 an electrical stimulation pulse if said monitoring means
14 does not sense a predetermined electrical event during
15 said variable time interval.

1 2. A body implantable stimulator according to
2 claim 1 wherein said monitoring means further comprises:
3 a sense amplifier.

1 3. A body implantable stimulator according to
2 claim 2 wherein said physiological parameter is molecular
3 oxygen level in venous blood.

1 4. A body implantable lead according to claim
2 1, 2, or 3 wherein said predetermined electrical event
3 further comprises an R-wave.

1 5. A body implantable lead according to claim
2 1, 2 or 3 wherein said predetermined electrical event
3 further comprises a P-wave.

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1 1. A demand heart pacemaker for providing
2 stimulating pulses to the heart at a predetermined rate in
3 the absence of naturally occurring heartbeats comprising:
4 sensing means for sensing naturally
5 occurring heart signals and generating a reset signal;
6 pulse generator means for generating
7 stimulating pulses at a minimum pacing rate, including
8 timing means for providing each stimulating pulse
9 separated by an escape interval corresponding to the
10 pacing rate and reset means responsive to a reset signal
11 for resetting said timing means and restarting the escape
12 interval;
13 means for measuring a physiological
14 parameter indicative of the level of cardiac output
15 demanded by the patient's body and for providing an escape
16 interval modifying signal; and
17 means responsive to the escape interval
18 modifying signal for adjusting the escape interval to
19 provide pacing pulses on demand at a minimum rate
20 correlated to the cardiac output requirements of the
21 patient.

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1 2. A demand heart pacemaker according to claim
2 1 wherein said adjusting means further comprises means for
3 decreasing the escape interval.

- 1/ ³~~1~~ 2 ³~~8~~. A demand heart pacemaker according to claim
2 ~~8~~ or ~~7~~ wherein said adjusting means further comprises
3 means for increasing the escape interval.

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